

WHAT IS CLAIMED IS:

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1. A toner container filling device for filling a toner container with toner, the toner container, when included in an image forming apparatus, supplying the toner to form an image, the toner

10 container filling device comprising:

a toner storage section configured to store the toner, the toner storage section having an air feeding entrance for feeding air thereinto, and the air fed thereinto fluidizing a portion of the toner stored
15 therein;

a toner container filling section configured to take the fluidized toner in from the toner storage section and pump the toner to the toner container;

a measurement unit configured to measure the
20 weight of the toner container and output weight data of the toner container; and

a control section configured to calculate the weight of the toner pumped into the toner container using the weight data of the toner container output
25 from the measurement unit, the control section

controlling the toner container filling section to
start pumping toner into the toner container when the
toner container is empty, and stop the toner container
filling section from pumping toner into the toner
5 container when the toner container is fully filled with
the toner.

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2. The toner container filling device as
claimed in claim 1, wherein

the toner container filling section includes
a nozzle at an end thereof for injecting toner into the
15 toner container and a shutter for opening and closing
the nozzle; and

the control section includes a switch unit
configured to open the shutter to start and close the
shutter to stop the toner being ejected from the nozzle,
20 and transmits a start signal and a stop signal,
respectively.

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3. The toner container filling device as
claimed in claim 1, wherein

the toner storage section is airtight; and

a toner transporting pipe is inserted into

5 the toner storage section and is connected to the toner
container filling section to transport the fluidized
toner from the toner storage section to the toner
container filling section.

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4. The toner container filling device as
claimed in claim 2, wherein

15 the toner storage section and the toner
container filling section are formed integrally;

the toner storage section has an inclined
side surface to cause the fluidized toner to flow into
the toner container filling section; and

20 the toner container filling section has an
air feeding entrance for feeding air thereinto to
fluidize a portion of the toner above the nozzle.

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5. The toner container filling device as claimed in claim 2, wherein

the control section is adapted to calculate
5 toner container filling time based on the timings of
the start signal and the stop signal.

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6. A toner production management system for
managing production of toner at a toner production base
and delivery of the toner from the toner production
base to a toner container filling base where the toner
15 is pumped into a toner container, the toner production
management system comprising:

a toner container filling device provided at
the toner container filling base for filling the toner
container with the toner delivered from the toner
20 production base; the toner container filling device,
while pumping toner into the toner container, measuring
toner container filling data and transmitting the toner
container filling data; and

a server configured to receive the toner
25 container filling data and determine the amount of

toner production at the toner production base and the time of toner delivery from the toner production base to the toner container filling base based on the toner container filling data.

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7. The toner production management system as
10 claimed in claim 6, wherein

the toner container filling device
comprises:

a toner storage section configured to store
the toner;

15 a toner container filling section configured
to take in toner from the toner storage section and
pump the toner into the toner container;

a measurement unit configured to measure the
weight of the toner container and output weight data of
20 the toner container; and

a control section configured to calculate
the weight of the toner pumped into the toner container
using the weight data of the toner container output
from the measurement unit and transmit the weight of
25 the pumped toner to the server as one element of the

toner container filling data, the control section
controlling the toner container filling section to
start pumping the toner into the toner container when
the toner container is empty, and stop the toner
5 container filling section from pumping the toner into
the toner container when the toner container is fully
filled with toner.

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8. The toner production management system as
claimed in claim 7, wherein

the control section includes a switch unit
15 configured to start and stop toner ejection from the
toner container filling section and the switch unit
transmits a start signal and a stop signal,
respectively; and

the control section calculates a toner
20 container filling time from the timings of the start
signal and the stop signal and transmits the toner
container filling time to the server as another element
of the toner container filling data.

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9. The toner production management system as
claimed in claim 6, wherein the server includes a
5 display unit configured to display the toner container
filling data transmitted from the toner container
filling device.

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10. The toner production management system
as claimed in claim 6, further comprises an image
capturing unit configured to capture an image of a
15 condition of the toner container filling device and
output video signals of the image to the server.